

6.17 STORMWATER MANAGEMENT

6.17.1 Purpose and Intent. Regulation of discharges to the municipal separate storm sewer system (MS4) is necessary for the protection of the Town of Monson's water bodies and groundwater, and to safeguard the public health, safety, welfare and the environment. Increased and contaminated stormwater runoff associated with developed land uses and the accompanying increase in impervious surface are major causes of impairment of water quality and flow in lakes, ponds, streams, rivers, wetlands, and groundwater which result in the; contamination of drinking water supplies; erosion of stream channels; alteration or destruction of aquatic and wildlife habitat; and flooding. This by-law establishes minimum storm water management standards for the final conditions that result from development and redevelopment projects to minimize adverse impacts offsite and downstream which would be born by abutters, townspeople and the general public.

6.17.2 The objectives of this by-law are:

1. To require practices to control the flow of stormwater from new and redeveloped sites into the town's storm drainage system in order to prevent flooding and erosion;
2. To protect groundwater and surface water from degradation;
3. To promote groundwater recharge;
4. To prevent pollutants from entering the town's municipal separate storm sewer system (MS4) and to minimize discharge of pollutants from the MS4;
5. To ensure adequate long-term operation and maintenance of structural stormwater best management practices so that they work as designed;
6. To comply with state and federal statutes and regulations relating to storm water discharges; and
7. To establish Monson's legal authority to ensure compliance with the provisions of this by-law through inspection, monitoring, and enforcement.

6.17.3 Applicability For the purposes of this bylaw, there are hereby established regulated areas as shown on the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Program Automatically Designated MS4 Areas map for the Town of Monson, dated 11/18/02. This map is hereby made part of the town zoning bylaw and is on file in the Office of the Town Clerk. No person may undertake a construction activity, including clearing, grading and excavation that results in a land disturbance that will disturb equal to or greater than one acre of land or will disturb less than one acre of land but part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one acre of land draining to the Town of Monson's municipal separate storm sewer system, as shown on the above referenced map, without a permit from the Special Permit Granting Authority. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity or the original purpose of the site. Construction activities that are exempt are:

1. Normal maintenance and improvement of land in agricultural use as defined by the Wetlands Protection Act regulation 310 CMR 10.04;

2. Maintenance of existing landscaping, gardens or lawn areas associated with a single family dwelling;
3. The construction of fencing that will not substantially alter existing terrain or drainage patterns;
4. Construction of utilities other than drainage (gas, water, electric, telephone, etc.) which will not alter terrain or drainage patterns;
5. Work activities of municipal, state or federal agencies or their agents outside of the Phase II boundaries as shown on the latest U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) Phase II maps.
6. As authorized in the Phase II Small MS4 General Permit for Massachusetts, storm water discharges resulting from the activities identified in Section 6.17.3 that are wholly subject to jurisdiction under the Wetlands Protection Act and demonstrate compliance with the Massachusetts Stormwater Management Policy as reflected in an Order of Conditions issued by the Conservation Commission are exempt from compliance with this by-law.

6.17.4 Permits and Procedures

1. The Special Permit Granting Authority (SPGA) under this bylaw shall be the Monson Planning Board. Such special permit shall be granted if the SPGA determines in conjunction with the Board of Health, the Conservation Commission, Water and Sewer Department and Highway Department that the intent of this bylaw, as well as its specific criteria, are met. The SPGA shall not grant a special permit under this section unless the petitioner's application materials include, in the SPGA's opinion, sufficiently detailed definite, and credible information to support positive findings in relation to the standards given in this section. The SPGA shall document the basis for any departures from the recommendations of the other town boards or departments in its decision.
2. The site owner or his agent shall file with the SPGA, ten (10) copies of a completed application package for a Stormwater Management Permit (SMP). Permit issuance is required prior to any site altering activity. While the applicant can be a representative, the permittee must be the owner of the site. The SMP Application package shall include:
 - (a) A completed Application Form with original signatures of all owners;
 - (b) Ten (10) copies of the Stormwater Management Plan and project description as specified in Section 6.17.5;
 - (c) Ten (10) copies of the Operation and Maintenance Plan as required by Section 6.17.6 of this by-law;
 - (d) Payment of the application and review fees

3. Entry. Filing and application for a permit grants the SPGA or its agent, permission to enter the site to verify the information in the application and to inspect for compliance with the resulting permit.

4. Other Boards. The SPGA shall give one copy of the application package to the Conservation Commission, Highway Surveyor, Water and Sewer Department, and Building Inspector.

5. Fee Structure. The SPGA shall obtain with each submission an Application Fee established by the SPGA to cover expenses connected with the Public hearing and application review of the Stormwater Management Permit and a technical Review Fee sufficient to cover professional review. The SPGA is authorized to retain a Registered Professional Engineer or other professional consultant to advise the *SPGA* on any or all aspects of these plans. Applicants must pay review fees before the review process may begin.

6. Actions. The SPGA's action, rendered in writing, shall consist of either:

- (a) Approval of the Stormwater Management Permit Application based upon determination that the proposed plan meets the Standards in 6.17.5.2 and will adequately protect the water resources of the community and is in compliance with the requirements set forth in this by-law;
- (b) Approval of the Stormwater Management Permit Application subject to any conditions, modifications or restrictions required by the SPGA which will ensure that the project meets the Standards in 6.17.5.2 and adequately protect water resources, set forth in this by-law;
- (c) Disapproval of the Stormwater Management Permit Application based upon a determination that the proposed plan, as submitted, does not meet the Standards in 6.17.5.2 or adequately protect water resources, as set forth in this by-law.

7. Project Completion. At completion of the project the permittee shall submit as-built record drawings of all structural stormwater controls and treatment best management practices required for the site. The as-built drawing shall show deviations from the approved plans, if any, and be certified by a Registered Professional Engineer.

6.17.5 Contents of Stormwater Management Plan

1. Application. The Stormwater Management Plan shall contain sufficient information for the SPGA to evaluate the environmental impact, effectiveness, and acceptability of the measures proposed by the applicant for reducing adverse impacts from stormwater. The plan shall be designed to meet the Massachusetts Stormwater Management Standards as set forth in the *Standards* of this section and the current edition of the Department of Environmental Protection guidelines and policies. The Stormwater Management Plan shall fully describe the project in drawings, and narrative. It shall include:

- (a) Locus map,

- (b) The existing zoning, and land use at the site,
- (c) The proposed land use,
- (d) The location(s) of existing and proposed easements,
- (e) The location of existing and proposed utilities,
- (f) The site's existing and proposed topography with contours at 2 foot intervals,
- (g) The existing site hydrology,
- (h) A description and delineation of existing stormwater conveyances, impoundments, and wetlands on or adjacent to the site or into which stormwater flows.
- (i) A delineation of 100-year flood plains, if applicable
- (j) Estimated high groundwater elevation in areas to be used for stormwater retention, detention, or infiltration.
- (k) The existing and proposed vegetation and ground surfaces with runoff coefficient for each,
- (l) A drainage area map showing pre and post construction watershed boundaries, drainage area and stormwater flow paths,
- (m) A description and drawings of all components of the proposed drainage system including:
 - (i) Locations, cross sections, and profiles, of all brooks, streams, drainage swales and their method of stabilization,
 - (ii) All measures for the detention, retention, or infiltration of water,
 - (iii) All measures for the protection of water quality,
 - (iv) The structural details for all components of the proposed drainage systems and stormwater management facilities,
 - (v) Notes on drawings specifying materials to be used, construction specifications, and typicals, and
 - (vi) Expected hydrology with supporting calculations.
- (n) Proposed improvements including location of buildings or other structures, impervious surfaces, and drainage facilities, if applicable,
- (o) Timing, schedules, and sequence of development including clearing, stripping, rough grading, construction, final grading, and vegetative stabilization,

- (p) A maintenance schedule for the period of construction, and
- (q) Any other information requested by the SPGA.

2. Standards. Projects shall meet the Standards of the Massachusetts Stormwater Management Policy, which are as follows:

- (a) No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or water of the Commonwealth.
- (b) Stormwater management systems must be designed so that post-development peak discharges rates do not exceed pre-development peak discharge rates.
- (c) Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge rate from the pre-development or existing site conditions, based on soil types.
- (d) For new development, stormwater management systems must be designed to remove 80% of the average annual load (post development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when:
 - (i) Suitable nonstructural practices for source control and pollution prevention are implemented;
 - (ii) Stormwater management best management practices (BMPs) are sized to capture the prescribed runoff volume; and
 - (iii) Stormwater management BMPs are maintained as designed.
- (e) Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management BMPs. The use of infiltration practices without pretreatment is prohibited.
- (f) Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas (see MA DEP's Stormwater Management Volume I: Stormwater Policy Handbook). Critical areas are Outstanding Resource Waters (ORWs), cold water fisheries, and recharge areas for public water supplies.
- (g) Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. However, if it is not practicable to meet all the standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.
- (h) Erosion and sediment controls must be implemented to prevent impacts during disturbance and construction activities.

- (i) All stormwater management systems must have an operation and maintenance plan to ensure that systems function as designed.
- (j) When one or more of the Standards cannot be met, an applicant may demonstrate that an equivalent level of environmental protection will be provided.

3. Project Changes. The permittee, or their agent, shall notify the SPGA in writing of any change or alteration of a land-disturbing activity authorized in a Stormwater Management Permit before any change or alteration occurs. If the SPGA determines that the change or alteration is significant, based on the design requirements listed in Section 6.17.5 and accepted construction practices, the SPGA may require that an amended Stormwater Management Permit application be filed and a public hearing held. If any change or deviation from the Stormwater Management Permit occurs during a project, the SPGA may require the installation or interim measures before approving the change.

6.17.6 Operation and Maintenance Plans

An Operation and Maintenance Plan (O&M Plan) is required at the time of application for all projects. The maintenance plan shall be designed to ensure compliance with the Permit, this by-law and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The Operation and Maintenance Plan shall remain on file with the SPGA and shall be an ongoing requirement. The O&M Plan shall include:

1. The name(s) of the owner(s) for all components of the system
2. Maintenance agreements that specify:
 - (a) The names and addresses of the person(s) responsible for operation and maintenance.
 - (b) The person(s) responsible for financing maintenance and emergency repairs.
3. Maintenance Schedule for all drainage structures, including swales and ponds.
4. List of easements with the purpose and location of each.
5. The signature(s) of the owner(s).
6. Stormwater Management Easements(s).
 - (a) Stormwater management easements shall be provided by the property owner(s) as necessary for:
 - (i) Access for facility inspections and maintenance,
 - (ii) Preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100-year storm event.

(iii) Direct maintenance access by heavy equipment to structures requiring regular cleanout.

(b) The purpose of each easement shall be specified in the maintenance agreement signed by the property owner.

(c) Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the SPGA.

(d) Easements shall be recorded with the Hampden County Registry of Deeds prior to issuance of a Certificate of Completion by the SPGA.

7. Changes to Operation and Maintenance Plans

(a) The owner(s) of the stormwater management system must notify the SPGA of changes in ownership or assignment of financial responsibility.

(b) The maintenance schedule in the Maintenance Agreement may be amended to achieve the purposes of this by-law by mutual agreement of the SPGA and the Responsible Parties. Amendments must be in writing and signed by all Responsible Parties. Responsible Parties shall include owner(s), persons with financial responsibility, and persons with operational responsibility.

6.17.7 Surety

The SPGA may require the permittee to post before the start of land disturbance or construction activity, a surety bond, irrevocable letter of credit, cash, or other acceptable security. The form of the bond shall be approved by town counsel, and be in an amount deemed sufficient by the SPGA to ensure that the work will be completed in accordance with the permit. If the project is phased, the SPGA may release part of the bond as each phase is completed in compliance with the permit but the bond may not be fully released until the SPGA has received the final inspection report as required by Section 6.17.8.4 and issued a Certificate of Completion.

6.17.8 Inspections

The SPGA or its designee shall inspect the project site at the following stages:

1. Initial Site Inspection: prior to approval of any plan.

2. Erosion Control Inspection: to ensure erosion control practices are in accord with the filed plan.

3. Bury Inspection: prior to backfilling of any underground drainage stormwater conveyance structures.

4. Final Inspection. After the stormwater management system has been constructed and before the surety has been released, the applicant must submit a record plan detailing the actual stormwater management system as installed. The SPGA or its agent shall inspect the system to confirm its “as-built” features. This inspector shall also evaluate the

effectiveness of the system in an actual storm. If the inspector finds the system to be adequate he shall so report to the SPGA which will issue a Certificate of Completion.

5. If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Stormwater Management Plan, it shall be corrected by the permittee before the performance guarantee is released. If the permittee fails to act the Town of Monson may use the surety bond to complete the work. Examples of inadequacy shall be limited to: errors in the infiltrative capability, errors in the maximum groundwater elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

6.17.9 Waivers

1. The SPGA may waive strict compliance with any requirement of this by-law or the rules and regulations promulgated hereunder, where:

- (a) Such action is allowed by federal, state and local statutes and/or regulations,
- (b) Is in the public interest, and
- (c) Is not inconsistent with the purpose and intent of this by-law.

2. Any applicant may submit a written request to be granted such a waiver. Such a request shall be accompanied by an explanation or documentation supporting the waiver request and demonstrating that strict application of the by-laws does not further the purposes or objectives of this by-law.

3. All waiver requests shall be discussed and voted on at the public hearing for the project.

4. If in the SPGA's opinion, additional time or information is required for review of a waiver request, the SPGA may continue the hearing to a date certain announced at the meeting. In the event the applicant objects to a continuance, or fails to provide requested information, the waiver request shall be denied.

6.17.10 Certificate of Completion

The SPGA will issue a letter certifying completion upon receipt and approval of the final inspection reports and/or upon otherwise determining that all work of the permit has been satisfactorily completed in conformance with this by-law.

6.17.11 Enforcement

1. The SPGA or an authorized agent of the SPGA shall enforce this by-law, regulations, orders, violation notices, and enforcement orders, and may pursue all civil and criminal remedies for such violations.

2. Orders.

- (a) The SPGA or an authorized agent of the SPGA may issue a written order to

enforce the provisions of this by-law or the regulations hereunder, which may include requirements to:

(i) Cease and desist from construction or land disturbing activity until there is compliance with the by-law and the stormwater management permit;

(ii) Repair, maintain, or replace the stormwater management system or portions thereof in accordance with the operation and maintenance plan.

(b) Perform monitoring, analysis, and reporting;

(c) Remediate adverse impact resulting directly or indirectly from malfunction of the stormwater management system.

(d) If the enforcing person determines that the abatement or remediation of adverse impacts is required, the order shall set forth a deadline by which such abatement or remediation must be completed. Said order shall further advise that, should the violator or property owner fail to abate or perform remediation within the specified deadline, the Town of Monson may, at its option, undertake such work, and the property owner shall reimburse the town's expenses.

(e) Within thirty (30) days after completing all measures necessary to abate the violation or to perform remediation, the violator and the property owner shall be notified of the costs incurred by the town, including administrative costs. The violator or property owner may file a written protest objecting to the amount or basis of costs with the SPGA within thirty (30) days of receipt of the notification of the cost incurred. If the amount due is not received by the expiration of the time in which to file a protest or within thirty (30) days following a decision of the SPGA affirming or reducing the costs, or from a final decision of a court of competent jurisdiction, the costs shall become a special assessment against the property owner and shall constitute a lien on the owner's property for the amount of said costs. Interest shall begin to accrue on any unpaid costs at the statutory rate provided in G.L. Ch. 59, § 57, after the thirty-first day at which the costs first become due.